The Week In Engineering and Construction

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Wage rates set for duration on government construction

Federal construction agencies and AFL agree that rates of July 1 will be top unless unusual conditions warrant change; Wage Adjustment Board organized

Construction wage rates on government projects have been frozen for the duration at the union rates in effect July 1, 1942. This was accomplished last week by an agreement between the Building Trades Department of the AFL and the government agencies in charge of construction—Army, Navy, Federal Works, National Housing, RFC, and the Maritime Commission.

This agreement was worked out entirely outside the framework of the Construction Labor Stabilization Agreement administered by the Labor Division of the War Production Board. It represents, moreover, a quite different conception of wage stabilization from that evidenced by the Board of Review set up under the stabilization agreement. In settling the Detroit wage dispute this month, the board froze the rates of the highest paid trade of each level of skill and raised the rates of other trades of the same skill. This is a much less rigid approach than freezing all wages as of the July 1 date.

Worked out under the auspices of the Department of Labor, the agreement provides, on the one hand, that the Secretary of Labor will, "unless compelling evidence to the contrary be presented," recognize the union rates of July 1 as the prevailing rates. The unions, on their side, agree that they will not ask increased wages except with the approval of a new Wage Adjustment Board which has been set up in the Department of Labor with Assistant Secretary Daniel W. Tracy as chairman.

The Wage Adjustment Board, moreover, will approve no increases except where rates are "inadequate because: (a) They were fixed at a time so long before July 1, 1942, as to be out of line with the general wages prevailing; (b) they were applicable in a locality where changing conditions in the building construction industry require a revision of wage rates; or (c) they do not sufficiently take into account any abnormal change of conditions."

Along with the agreement, the Secretary of Labor issued an order setting up the board, under Tracy, and including three representatives of the government agencies and three representing the unions. Requests for wage adjustments are to be submitted to the board by local unions through the Building Trades Department with the approval of the international union.

There is no employer representation on the board, which is a rather unusual make-up for an arbitration body of this sort. Labor members of the Wage Adjustment Board are John Coyne, president of the building trades department, Harry Bates of the bricklayers, and Robert Byron of the sheet metal workers. These men are generally well thought of by both labor and employers.

Much will depend on the personality of the board. The agreed-upon grounds for wage adjustment are so broadly phrased that the "stabilization" agreement could mean almost anything from a rigid wage freeze to complete flexibility. Labor has at least an apparent four to three majority on the board, since Assistant Secretary Tracy is a former official of the AFL electrical workers.

The one clear affect of the agreement is that determination of wage rates on government construction is entirely removed from the area of collective bargaining and becomes subject to the determination of a board.

Not to be ruled out is the possibility that this arrangement may prove temporary, may be absorbed in some wider program of general wage stabilization. Ever since President Roosevelt put forward his anti-inflation program involving, as one component, stabilization of wages, an undercover battle has been going on among the various federal agencies for control of the program.

The contenders have included the War Labor Board (which was referred to by the President in his message to Congress but which has had no further directive); the labor division of WPB, which has been pushing its construction and shipbuilding stabilization agreements as a possible pattern of wage control; the new War Manpower Commission; and the department of labor. The department has generally been favored by the unions themselves, and the new construction agreement is seen by some observers as strengthening the department's position.

Greater Kansas City settlement

Granting general wage increases to construction trades workers, the Builders' Association of Kansas City, Mo., acting as bargaining agency for employers in Greater Kansas City, last week completed negotiations with the Building and Construction Trades Council of Kansas City and Metropolitan Area. Workers in five

(Continued on following page)

Halt building of amusement facilties

Taking its first step to broaden the construction order, L-41, by stopping work already underway, the War Production Board last week ordered work stopped on construction projects "primarily for the amusement of the public."

The new order, L-41-a, requires that all such projects which were underway May 23 be halted by June 6 unless they cost less than $5,000 or had been specifically approved by WPB. Strictly temporary structures and children's playgrounds are still permitted.

Last month's order L-41 forbid initiation of new projects without authorization after April 9, but permitted projects underway on that date to continue. It is expected that further orders halting particular types of non-essential work will be issued soon.

Maintenance and repair of amusement structures is apparently not interfered with by the new order. "Construction" is so defined in L-41 as to exclude these types of work. "Repair" is rather broadly defined as "restoration without change of design of any portion of a building, structure, or project to sound working condition, when such portion has been rendered unsafe or unfit for service."

surrounding counties are affected.

Union agreements generally expired March 31, 1942, but both sides awaited completion of stabilization negotiations at Detroit (*ENR*, May 21, p. 833 and previous) before announcing a final solution.

Rises in basic hourly wages granted included:

Bricklayers and plasterers up 2½ and 7½ cents, respectively; carpenters and cement finishers, up 12½ cents; engineers and iron workers, up 12½ cents; marble, tile and terrazzo workers up 7½ cents; roofers up 12½ cents; common laborers up 5 cents; truck drivers up 7½ cents. Painters did not ask or receive any wage increases.

Louisville increases expected

Charles W. Williams, economics instructor at the University of Louisville, last week recommended to the Louisville Building Trades Council and eight employing contractors the granting of a 10 cent increase in the hourly wage rate for 150 members of the AFL's Carpenters and Roofers Union Local. The rise would bring hourly wage rates to $1.10 per hour, which Professor Williams, acting as arbitrator, said was justified by increases in living costs.

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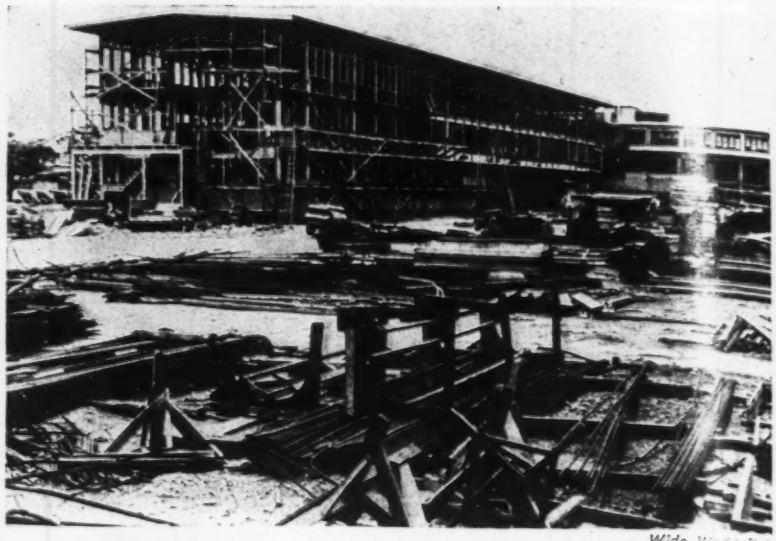
War work seen taking most construction labor

Almost 90 percent of all construction workers will be required for the war effort by the end of 1942, according to a report issued last week by the National Industrial Conference Board, Inc.

In the same period, the board said that war will reduce civilian employment to 26.5 million, compared with 34.2 million at the end of 1941, absorbing almost 70 per cent of all employees in manufacturing trades, and fully 50 percent of all persons employed in transportation and public utilities.

Explaining that the conversion problem remaining ahead of American industry is greater than the changes introduced in industry from Pearl Harbor to date, the board added that by the end of March the total of all completed war production amounted to only 18.7 million dollars, or less than 50 per cent of the total existing war production load. War commitments were further increased by 19 million dollars in April, while the total amount of production completed in April as measured by payments on contract was about 2½ million dollars. At the end of November, 15 per cent of the total production load had been worked off, in January, the figure was 15 per cent again, and in March 14 per cent. At the April rate of production, unfilled orders are equivalent to a 2½-year production load on industry.



Wide World Photo

Push rebuilding of bombed Hawaii buildings

Military buildings damaged by the air raid Dec. 7 on Pearl Harbor, Hawaii, are rising again stronger than ever before, according to information recently made available.

Shown above is a barracks structure almost completely reconstructed. It was one of several damaged in the raid (ENR Dec. 25 1941, p. 906).

H. W. Lea heads Canada technical help bureau

H. W. Lea, of Montreal, formerly chief technical officer of the Canadian Wartime Bureau of Technical Personnel, has been appointed director of the Bureau to succeed Elliott M. Little, now director of the Dominion's National Selective Service system.

Mr. Lea, a graduate civil engineer, formerly was manager of the Montreal office of the Phillips Electrical Works.

Road bureau refines used oil for re-use

The North Carolina Highway and Public Works Commission said last week it will provide for about 25 percent of its annual consumption of lubricating oil for machinery by refining used oil in its own refinery at Raleigh.

Oil is drained from the crankcases of the more than 6,000 pieces of highway equipment throughout the state, and sent to the refinery. Although the commission has refined used oil on a small scale for several years, the program has been stepped up by replacement of equipment until the plant can turn out 200 gal. of usable oil each nine hours. The reclaimed oil costs about 15 cents a gallon.

Plan salvaging Normandie by controlled pumping

A special committee appointed by the Navy Department to survey possibilities of salvaging the former French liner Normandie (*ENR* April 23, p. 597 and previous) last week submitted to the Navy Department a report that the most practical salvage method for the capsized ship is controlled pumping.

The steamship was being converted into a troop transport when it burned and capsized at its pier in New York Harbor Feb. 10.

Making no estimate as to time required for the salvage operation, the committee said the ship now rests with its center of gravity on the edge of a shelf of bedrock. The group noted that as river mud subsides under the weight of the vessel, there is possibility of a break in the mid-section, on the rock.

Salvage operation will entail complete removal of all structure above the promenade deck, cleaning out of the underwater portion of the vessel to provide accessibility for divers, construction of hatches over air and cargo ports and miscellaneous ports and drain pipe openings under water in the port side of the ship; removal of about 10,000 cu.yd. of mud from the submerged part of the hull; shoring the promenade and main deck; extending certain transverse bulkheads and fitting a number of concrete bulkheads between decks; removing a section of the outboard end of the pier at which the ship lies to permit the vessel to right itself.

WPB lumber freeze order may force further curtailment of war housing

Local dealers' stocks inadequate to cover demand as WPB prepares to issue special lumber authorizations if needed. FPHA plans construction of dormitory units for housing workers.

The War Production Board's lumber freeze order (*ENR*, May 21, p. 836) has brought to a head the constantly increasing difficulties which material shortages and uncertain priority ratings have imposed on public housing construction. Although no jobs of the Federal Public Housing Administration are known in Washington to have shut down completely, several have slowed operations and many are in danger of shutdown.

The WPB lumber order forbids the sale of lumber by wholesalers, for sixty days, except to the Army, Navy, Maritime Commission, and for construction of war plants. This was done to clear the way for a huge Army buying program. It was thought that retail stocks, which were not frozen, would be sufficient to meet other demands for two months. As it turns out, however, retail inventories are so irregularly distributed through the country that they cannot be made to cover the need. Moreover, public housing contractors usually buy lumber in larger quantities than retail dealers can supply.

Late last week, WPB announced that it was prepared to issue special authorizations for delivery of lumber to housing jobs "where vital need for completion of such projects is determined by the War Production Board and the various housing agencies concerned."

This may ease the situation somewhat, but the Federal Public Housing Authority is somewhat dubious of the requirement that each individual project be reviewed by WPB before authorization will be granted. Since last March, FPHA has been unable to get priorities on its projects; applications aren't turned down, but they aren't approved either. About 90,000 projects, some of them already under contract, are now awaiting ratings. There is a certain amount of feeling in WPB that the whole housing program might well be abandoned.

What ratings FPHA has obtained are rather low, averaging about A-4. Recently an agreement was worked out that any future ratings granted would be A-2 (sufficient to get most things except copper), and this week FPHA officials are urging WPB to accept an arrangement by which a project designed to serve workers at a plant would receive the same rating as the plant.

Regardless of the outcome of the lumber situation, FPHA is now reconciled to the necessity for constructing in the future housing of a simplified type, lacking most of the conveniences ordinarily sought in permanent houses. As a step in this direction it is now preparing basic designs for dormitory units—mere sleeping quarters—which in many cases can be substituted for family dwellings with the idea that plant workers will leave their families at home. These would be simple one story buildings—two or three wings of sleeping rooms surrounding a central building with heating and sanitary facilities. Dining and recreational facilities would be in one building.

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Argentina plans huge sanitary program

The Argentine government last week announced a planned $300,000,000 program for extension of water, drainage and sanitary services generally to towns, villages and hamlets lying within a radius of 22 miles of Palermo.

The work is to be spread over a period of 30 years and will include extension of the present filter installations in Palermo at a cost of $17,000,000; construction of a new intake and filtering center alongside the present waterworks in Palermo at a cost of $87,200,000; similar installations in the Buenos Aires province.

Seek decision on legality of interstate bridge tax

The city of Greenville, Mississippi, has announced it will ask a United States district court to decide whether the municipality must pay an advalorem tax to the state of Arkansas on that portion of its Greenville-Lake Village bridge which lies within Arkansas.

The action was announced after the Arkansas Corporation Commission said it was preparing 1941 and 1942 assessments on the Arkansas portion of the bridge.

The structure was recently valued by Greenville authorities at about $3,800,000, and the city contended that only three percent of the structure is in Arkansas. Valuation of the portion within Arkansas was placed at $39,000, which would produce a tax of about $1,500.

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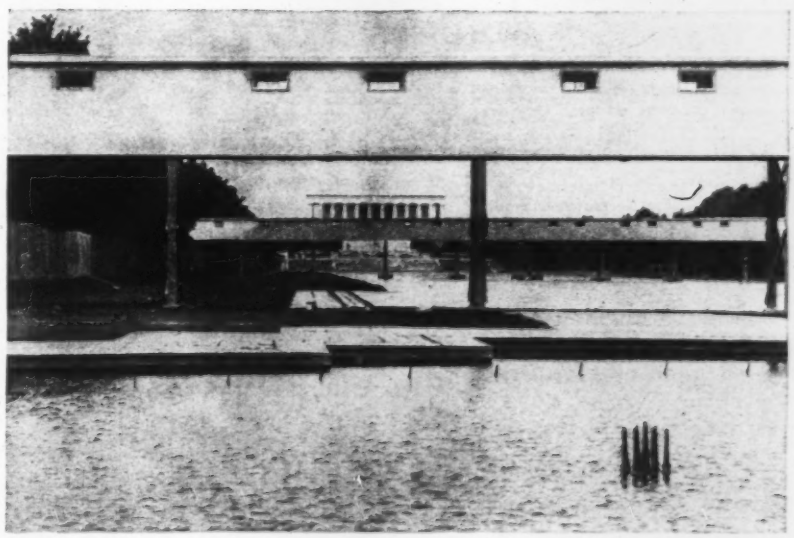
Delaware tunnel section ready for emergency use

A fourteen-mile section of New York's Delaware Aqueduct, between Kensico and Hillview Reservoirs, has been rushed to completion and is ready for use as an emergency supply line. This section is the first of the 85-mile tube to be completed.

Mayor F. H. LaGuardia told city residents in a radio broadcast that enough of the gates, valves and operating controls have been installed to insure operation if the need arises.



Beauty gives way to utility at the Nation's Capital

Two covered wooden bridges spanning the reflecting basin which extends between the Lincoln Memorial and the Washington Monument in Washington have been opened to accommodate personnel of the Navy Department. The bridges connect the Navy Department headquarters with a war-time annex on the opposite side of the pool.

P. B. HEIDEMA (center), associate engineer in charge of the soils testing laboratory in the Houston, Texas, office of the U. S. Engineers, discusses with two members of his staff reports concerning the $32,000,000 flood-control program now under way to protect Houston. At the left is D. M. Greer, while at the right is Mrs. D. H. Lewis.

With his office carrying out an $8,500,000 program this year, J. G. TURNEY, director of public works for Houston, Texas, is plenty busy these days. One of the biggest jobs is to be construction of 5 miles of trunk sewer of 60 to 120 in. size and with wellpoints to be required during much of the construction.

A new collapsible type of airport hangar door has been developed by D. R. YOUNGER president of Younger Engineering Co., San Antonio, Texas. Four of the new doors have been installed on hangars at Garner Field, Uvalde, Texas, and Mr. Younger has reason to be proud of them. For details of the new door see ENR May 7, 1942, p. 772.

MEN AT WORK

"Deep in the heart of Texas"

These two are supervising a construction program costing between three-quarters of a billion and a billion dollars. They are: COL. S. L. SCOTT (seated), division engineer of the Southwest Division Office, U. S. Engineers, Dallas, Texas, and MAJ. P. D. BERRIGAN, executive assistant in the same office.

As officer in charge of the San Antonio, Texas, district office of the U. S. Engineers, LT. COL. T. M. OSBORNE is plenty busy these days. In his district are many defense projects and the work varies from airport construction to building warehouses of extremely large size.

J. B. WINDER (seated), chief engineer of the Dallas, Texas, city waterworks, and K. F. HOEFLE, distribution engineer, take time out to chat with an ENR editor and to talk photography for a short time. Both men have been connected with the Dallas waterworks for several years.

Few men could tell you more about the engineering works of Houston, Texas, than J. C. McVEA, now director of the city's waterworks department. He was made director in March, 1941, after twelve years of private work as consultant on municipal improvements. For sixteen years before that he was connected with the city engineer's office, including ten years as city engineer.

With Barker Dam of the comprehensive Buffalo Bayou flood control project now under construction, the men above, all engineers of the Houston Office of the Galveston Engineer District, are playing an important part. Left to right they are: W. M. FOSTER, office engineer; C. E. RANTZOW, engineer in charge; and J. F. LONG, assistant engineer of the Galveston District lands division.

Structural details of the new $3,000,000 Mercantile Bank Building now under construction at Dallas, Texas, are discussed by R. O. JAMESON (left), structural engineer for the project, and E. S. HELTON, superintendent for Henger Construction Co., general contractors for the work. For details of their job see Engineering News-Record, May 7, 1942 p. 782.

Connected with the San Antonio waterworks for 34 years, J. W. ECKLES, now in charge of new construction and repairs, knows nearly all of the system's 67,700 users.

ROY L. CARTER (left), principal engineer, and JOHN C. HAYS, associate engineer, on army airport work at San Antonio. Both have been with U. S. Engineers several years.

Civilians holding key positions in the Southwest Division office of the U. S. Engineers at Dallas, Texas, includes these five men. Seated, left to right are: H. G. DOKE, senior engineer on civil construction, and R. G. McGLONE, head engineer in charge of the engineering division. Standing are: C. H. ANDREWS, engineer on defense construction; W. R. CLARK, office engineer; WENDALL ORNDORF, assistant engineer on airports.

On the shoulders of two below a big burden in connection with the defense construction program of the San Antonio, Texas, district office of the U. S. Engineers. At the left is M. J. GERHARDT, recently named chief of the design section, and at the right, CAPT. R. C. CARHART, officer in charge of operations. Mr. Gerhardt had been in private work for many years and joined the U. S. Engineers early this year.

Getting the lowdown from those in charge on a large U. S. Engineer job in the San Antonio, Texas, area. Left to right the men are: A. N. Carter, assistant editor of ENR; A. J. VANN, sub-contractor for the structural steel erection; W. LEON STATEN, resident engineer for all construction by the San Antonio area office of the U. S. Engineers; and P. A. SANDSTRUM, superintendent for the general contractors, Hill & Combs Co.

Flash floods destroy highway bridges, roads and railroads in Pennsylvania

Heavy rains swell streams in central and eastern part of state, taking toll of 30 highway bridges; water systems temporarily disabled and collieries out because of high water

Torrential rains that swelled dozens of tributaries of the Susquehanna, Lehigh, Schuykill and Lackawanna rivers in eastern and central Pennsylvania caused a series of flash floods last weekend that brought millions of dollars of damage to roads and buildings and caused the loss of at least 25 lives.

The flood damage here as in other places, immediately brought to the fore the problem of making replacements in an economy where almost all needed materials are under strict priority control.

Precipitation in the flood zone, as reported by the U. S. Weather Bureau was: Gouldsboro, 7.85 in. between May 17 and May 23, with 3.57 in the last 24 hr.; Parkplace and Hazelton, over 8 in. between May 16 and 23; Lansford, 4.73 in. in the 24 hr. ending 9 p.m. of May 22; Reading, 5.74 in. in 48 hr. ending early May 23; Scranton, 2.65 in. in six hours between 4 p.m. and midnight May 22, and Wilkesboro, 3.65 in. from May 16 to early May 22.

As totalled by the Pennsylvania Department of Highways, 35 bridges were washed out—16 of them being major structures—and 22 state highway routes were either blocked or under detour in the flood area, some roads having been under water 3 ft. deep. Several municipal water systems temporarily were disabled when river waters inundated the supply sources, and the state shipped tons of chloride of lime for disinfection purposes.

While 600 WPA men and 40 trucks aided local authorities in the cleanup, state officials declined to estimate losses. However, reports from *Engineering News-Record* correspondents and others indicated total damage to railroads, highways, buildings, etc., might be $20,000,000.

The Bethlehem Steel plant at Bethlehem was forced to suspend operations for a time because of high water in the Lehigh River; five collieries of the Hujuon Coal Co., north of Scranton, were flooded.

Hardest hit in the area was the town of Honesdale, a community of about 8,000, where at least eight persons were known to be dead after a dam on the Lackawaxen River above the town was shattered by the pressure of flood waters. Street lighting systems in the town were completely out and telephone communication was stopped for several hours. At Reading, the Pennsylvania Railroad station's platform was under 8 ft. of water and workmen were marooned by high water for hours in the plants of the Penn Hardware Company and the Reading Car Wheel Works. The flood at Reading was the worst since 1933, with a measurement of 20.6 ft. above normal stage at one time.

The highway department, announcing that five bridges washed out at Honesdale created "a serious communications problem," said that the Corps of Engineers would rush pontoon bridges to the town to serve as temporary replacements.

At Hazelton the flood was reported as the worst in 34 years, with water flowing over the entire city for several hours, washing out highways and sections of railroad. Other heavy flood damage was reported at Pottsville, Weissport, Bethlehem, Easton, Pottstown, Mauch Chunk, Lehighton, Wellsboro, Carbondale, Hamburg and Hawley.

Other floods reported

Ten inches of rain in less than 24 hours last week sent several mountain streams in western North Carolina out of their banks, inundating thousands of acres of farm lands and several stretches of highway, sending the French Broad River to flood stage. Water rolled over several sections of Highway 64 between Brevard and Hendersonville, and over sections of the highway connecting Brevard with Greenville. In places water was said to have undermined the roadway. At Dallas, Tex., the Trinity River, which had already caused one disastrous flood this spring, rose close to flood stage, as a result of heavy rains, but subsided before any serious damage was done.

Dikes on the Missouri River near Peru, Neb., broke under pressure of the river's record high stage and flooded several acres of land and the Peru airport. The river was at 18.4 at Nebraska City last week although no other serious damage was reported.

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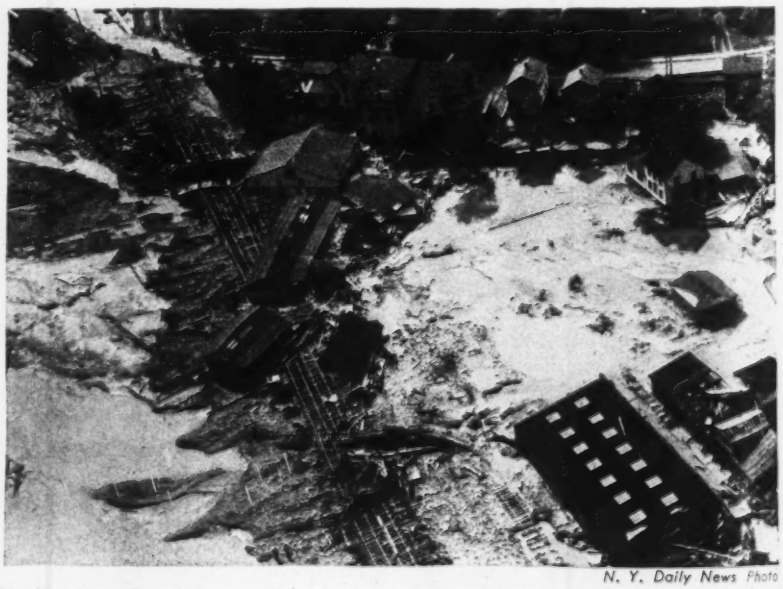
Road bureaus set up disaster aid squad

Because highway department machinery represents the only adequate heavy material moving equipment available in many localities, highway departments of many states have offered cooperation to local civilian defense organizations in the event of disaster.

In North Carolina, division engineers of the North Carolina Highway and Public Works Commission have been instructed to contact local civilian defense committees and offer the use of employees; motor vehicles and construction equipment in demolition and evacuation work.

In Ohio, the disaster organization of the department of highways, organized several months ago, received its initial test recently when it supplied four trucks, 40 men, and equipment to aid in fighting two forest fires in Liberty Township, Jackson county.



N. Y. Daily News Photo

At Hawley, Pa., the swollen Lackawaxen River tossed buildings across railroad tracks as flash floods hit eastern and central Keystone state areas.

Lock work at Panama modified by order

The Secretary of War announced on May 23 that "instructions are being issued to Major General Glen E. Edgerton, Governor of the Panama Canal, to modify the construction program for the Third Locks Project in order to conform more closely to the over-all war program.

No information as to what action is to be taken was contained in the Secretary's statement, which concluded with the following:

"The Third Locks Project was authorized by Congress Aug. 11, 1939, for the purpose of providing increased canal facilities across the Isthmus of Panama. Actual construction commenced July 1, 1940, and is being carried forward as rapidly as practicable."

Much work underway

When the work was authorized, construction of the new locks with their approach channels was expected to take six years and cost $227,000,000. The War Department Civil Appropriation Act of 1941 provided $15,000,000 in cash and $99,000,000 in authorization for the new work, and on July 1, 1940, the dredge *Cascadas* started work on approach channels for the third set of locks. Subsequently government forces cleared the jungle growth at the sites of the new locks, and early in 1941 a contract of $8,517,100 for rough excavation at the new Gatun lock was let to the Martin Wunderlich Co., and the Okes Construction Co. About 12,000,000 cu.yd. of excavation was involved. On April 24, 1941, a contract for 28,700,000 cu.yd. of excavation, including over 2,000,000 yd. of rock, also some railroad and highway relocation work, was let to Panama Constructors, Inc., for $22,436,086.

In September, 1941, a contract to furnish 19,440,000 tons of concrete aggregate for the project was let to the Nevada Constructors, for $6,880,000.

Two contracts for cement were let in August, 1941, 4,000,000 bbl. to Trinity Portland Cement Co. for $5,400,000, and 2,000,000 bbl. to Lone Star Cement Co. for $2,790,000. In September a contract to furnish 19,440,000 tons of concrete aggregate was let to Nevada Constructors, Inc., for $6,880,800.

A contract for construction of the new Gatun locks, including gates, operating machinery and other auxiliaries, was let in February of this year to the Rosoff Panama Construction Co. for $45,705,000. A further contract for gates, valves, and bulkheads was awarded in March to the Treadwell Construction Co. for $16,007,498.

A contract for construction of the new Miraflores and Miguel locks was awarded to the Panama Constructors, Inc. (contractors for the excavation work at those locks) in May for $82,982,645.

A considerable amount of appurtenant work such as highway and railway relocation is being carried out by the canal forces. Included is a swing bridge over the old Miraflores Lock approach channel. Contract for the superstructure of that bridge was let to the Pittsburgh-Des Moines Steel Co. in April, 1941, at $1,078,840, and the work was completed recently.

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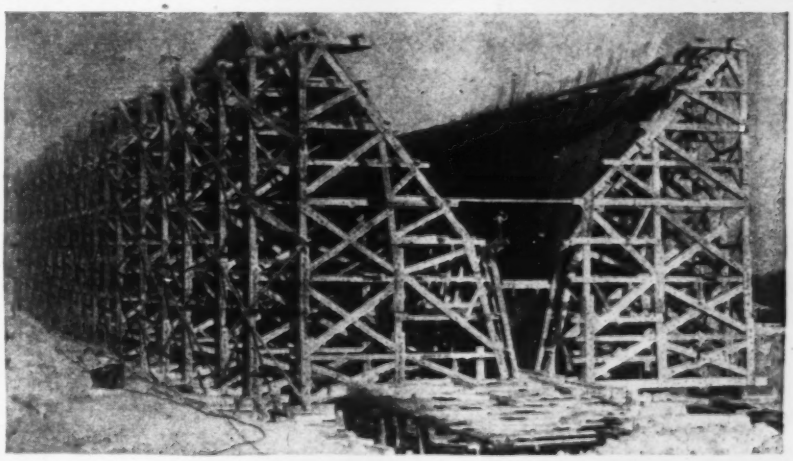
Los Angeles sewage plant permit revoked by state

California's Department of Public Health on May 20 revoked the operating permit of the Hyperion sewage screening plant through which passes the major portion of sewage flow from the city of Los Angeles. Tributary to this plant are more than 60 miles of main trunk sewers, serving a population 1,595,000 and delivering a flow of about 130 mgd.

The Hyperion plant it is charged removes not more than 5 percent of the solids from the sewage prior to its discharge through a 5,000-ft. outfall. The latter leaks along its entire length, causing serious pollution of the adjacent water and beaches of Santa Monica Bay, extensively used by bathers and vacationists. Construction of the outfall was described in *ENR*, Aug. 21, 1924, p. 296 and Aug. 25, 1925, p. 292; repairs to leaky joints were described in the issue of April 7, 1927, p. 566.

Revocation of the permit culminates years of complaints and warnings during which the city has sought funds for improvement. There is no indication that Los Angeles has any immediate alternative to disregarding the revocation of the permit. A $32,000,000 sewage disposal improvement program was prepared two years ago (*ENR*, Feb. 29, 1940, p. 315).



Keels laid for Maritime Commission's concrete barges

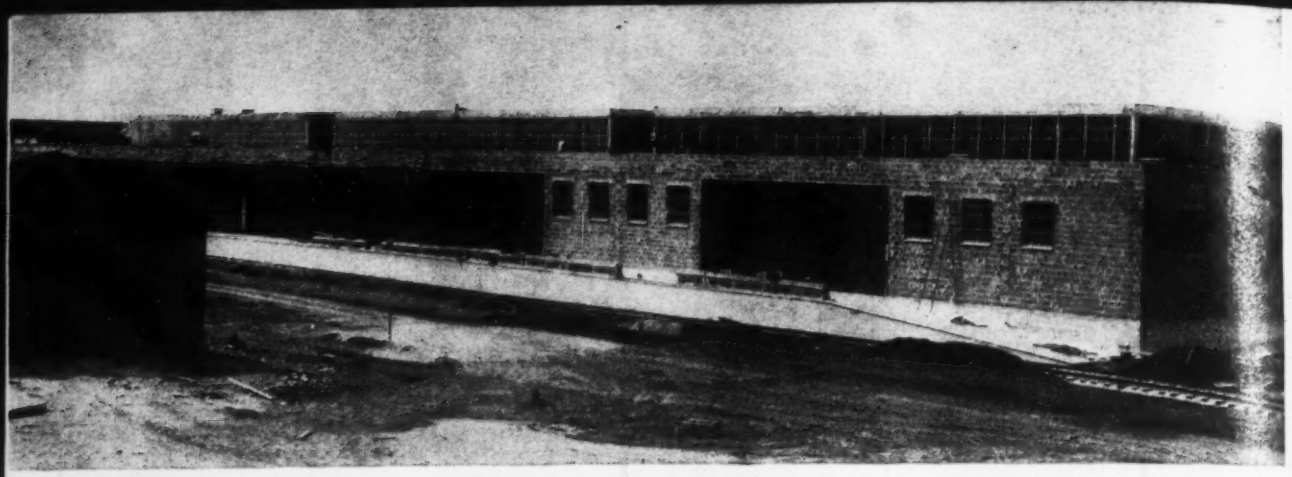
Keels were laid May 22—Maritime Commission Day—for two concrete barges on the ways of the MacEvoy Shipbuilding Co. at Port Wentworth, near Savannah, Ga. The barges are to be 350 ft. long between perpendiculars, 366 ft. overall, and have a 54 ft. beam and a total depth of 36 ft. Displacement will be about 12,000 tons at 28 ft. draft.

No propulsion is provided, but the hulls are otherwise designed like ship hulls. A power operated rudder and power winches are part of the equipment.

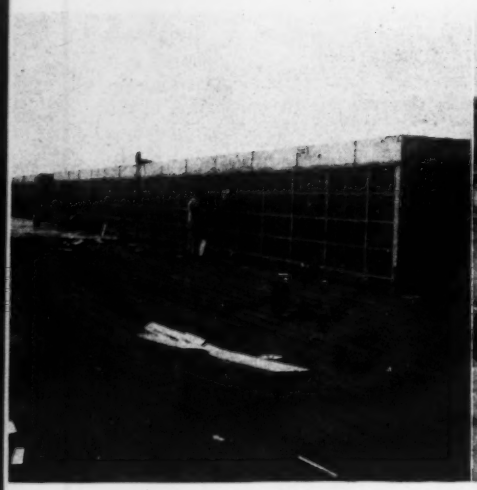
The concrete shell is 5 in. thick on the bottom, 4¼ in. on the sides and 4 in. on the bulkheads and decks. Transverse concrete frames are spaced at 10 ft. 8 in. centers throughout the vessel with oiltight bulkheads at each third frame. Two longitudinal bulkheads extend the full length of the vessel, 9 ft. on either side of the low keelson on the center line. On the two hulls at the MacEvoy yard, exterior forms are almost complete and the layer of transverse steel is in place constituting about one-third of the work. Reinforcing in the bottom is ½ in. round steel transversely at 2½ in. c.c., 1 in. square bars longitudinally at 5 in. c.c., a ⅜ in. spacer bar, 1 in. square bars longitudinally at 5 in. centers spaced between the lower layer and the ½ in. bars at 2½ in. c.c., transversely. Hulls require about 2,300 cu.yd. of concrete, made with lightweight aggregate, and 1,480 tons of reinforcing.

The barge building program of the commission now consists of about 50 vessels of the type described. On the west coast, Concrete Ship Constructors, of National City, Calif., laid their first keel May 1. San Jacinto Shipbuilding Corp. of Houston, Tex., is building a yard for construction of other barges.

Clifford F. MacEvoy, president, is in general charge of the work at the Georgia yard, with W. J. MacEvoy, vice president, as general superintendent. J. P. Sartz is resident inspector for the Maritime Commission.

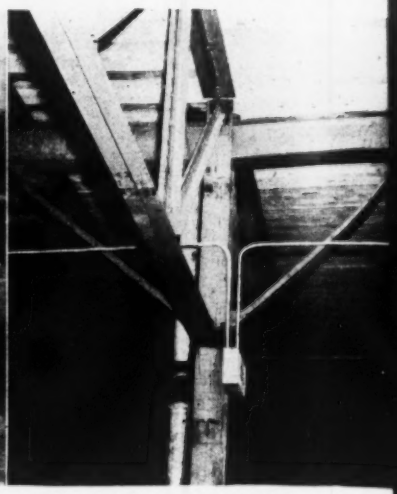


Meeting the need for rapid wartime construction, this warehouse was completed ten weeks ahead of the original schedule. The walls are of 8-in. hollow-tile with scored exterior surface on which stucco will be applied. Note railroad siding, loading platform and canopy.

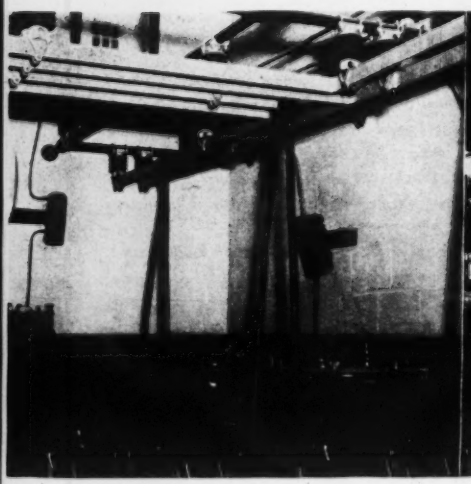


Transverse monitors set back 30 ft. from building's edge require 24,000 sq.ft. of 1/4-in. thick, wire-inserted glass and one carload of putty. The 14x18-in. panes are inserted at the rate of 130 per man per day.

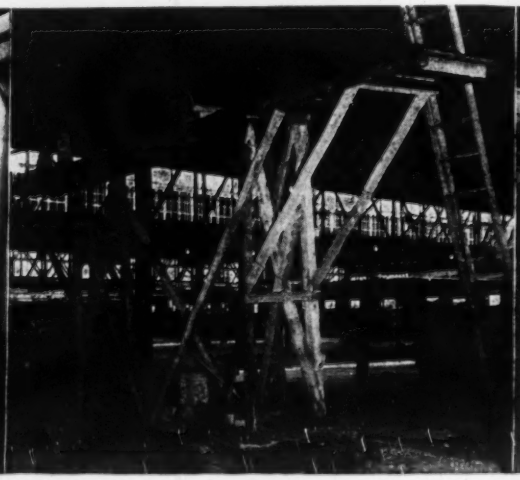
Transit-mix trucks operating from a nearby central mixing plant supply all concrete. To save time the earth fill below floor level was placed early. The trucks could then dump directly into the foundation forms.



At the columns along the middle of the 11[illegible] wide monitors cast-iron down spouts are [illegible]quired. Truss is along center line of [illegible] and its upper chord is curved to provide [illegible]sary drainage.



Power supply for entire building is from a central 10x15-ft. room inclosed with glazed tile to house three 37 1/2-kva. and one 100-kva. transformers.

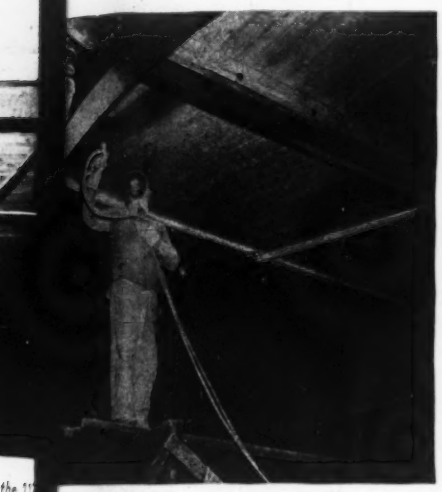


Much of the electrical and other work in the roof framing was done by workmen on handy scaffolds of the type above. The scaffolds resulted in very rapid work.

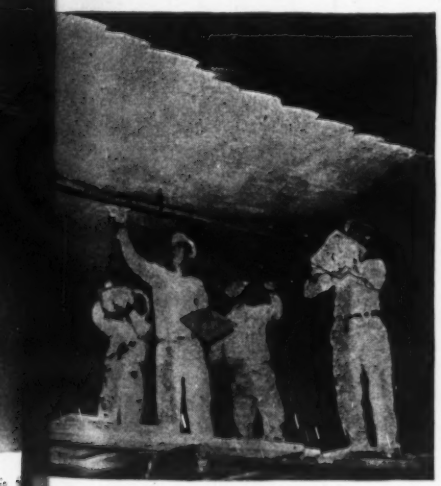
Mechanical finishers smooth the 6-in. [illegible] reinforced-concrete floor, which is [illegible] in alternate 20x30-ft. sections. The [illegible] reinforced with 3/8-in. mesh.

stimated Building Schedule: 9 Months
How the job was done in 26 weeks

Completing in 6½ months a 396x480-ft., one-story warehouse, originally scheduled to require nine months for construction, is one of the many aids to the war program by the U. S. Corps of Engineers.



Spray guns are used to paint roof and roof framework with white paint. Painter is on a roller-mounted, wood frame scaffold, which one man may move easily. Each painter uses an individual compressor.



In one corner, to store rubber products, roughly 17,000 sq.ft. is made windowless and a false-ceiling of metal mesh covered by plaster is suspended from the roof framing.

A neighboring 396x680-ft. building of similar construction, which the new structure joins, required one year for completion.

Rapid advancement with the present work has been possible for several reasons, including: (1) use of construction materials as they arrived, to eliminate the need for large storage areas; (2) success in getting material deliveries on time, which was possible by substitutions and ordering supplies early; (3) placing concrete for the foundations directly in the forms by transit-mix trucks dumping from the fill required in the building's interior; (4) extensive sub-contracting to obtain specialized well-trained crews for all operations; (5) close coordination between the contractor and government forces; (6) centralizing control of inspection for all the various operations under one head; (7) a sufficiently large supply of well-trained craftsmen for the different trades; and (8) early settlement of all labor troubles, which eliminated strikes and shutdowns on the closed-shop job.

Steel-frame construction

The warehouse is of steel-frame construction. There is a railroad track and canopy along either side, and a third railroad located in the center of the building. Spacing of the interior columns, which are mainly 8 in., 49 lb. H-sections, is 40 ft. longitudinally and 60 ft. transversely. This spacing is possible by using for the roof framing 60-ft. spans, 7½-ft. deep transverse trusses on 40-ft. centers, and longitudinal 16-in., 67-lb. I-beams on 20-ft. centers, plus 6-in., 13-lb. channels on 6-ft. centers, as purlins. This arrangement permits 112-ft. wide, transverse monitors separated by 16-ft. wide valleys. A 20-year tar-and-gravel built-up roofing over 2-in. wood planking completes the roof.

The outer walls consist of 8-in. thick hollow tile with a smooth inner face and a scored outer surface to bond with the ¾-in. thick, exterior stucco covering. Interior column foundations are a reinforced-concrete footing carried to 17 ft. below the floor elevation. Foundations generally consist of 2-ft. square sections for the upper five feet, then an 18-in. dia. section for 6 ft., and finally a 6-ft. deep cone-shaped section increasing in diameter to about 7 ft. at the bottom. The foundations for the exterior columns are much the same, but between the outside columns a 5 2/3 ft. deep by 9-in. thick grade beam is used.

Steel erected in 3 weeks

Erection of 912 tons of structural steel was accomplished in rapid time—three weeks. The steel was delivered on the railroad track at the east side of the building and it was unloaded by a stiff-leg derrick with a 103-ft. boom. This derrick, operating on a track in the first bay, also erected the steel for the eastern 120 ft. of the building and delivered the steel required for the remaining 276 ft. of the width to four trucks of one and one-half to five tons capacity. Two of these trucks, equipped with 35-ft. booms and short A-frames, erected the columns and distributed the roof steel for erection by the other two. The steel erector employed a 36-man crew eight hours a day, six days a week, except for the last week, when two extra riveting crews of about 30 men each were added.

Construction of the reinforced-concrete footings was also very rapid. The foundations were prepared by three boring machines of the type widely used in that area, while the concrete was delivered as transit mix from a batching plant located at the north end of the building. In about four weeks, roughly 175 men working six days a week built the forms and placed the concrete for the column footings, grade beams, and walls of the loading platforms. The transit mix trucks dumping directly into the forms by operating on the required earthfill greatly expedited this work, as mentioned previously.

Floor built in alternate blocks

In all, 19,000 cu.yd. of fill were required and this was placed in 1-ft. layers by dump trucks and compacted by a tractor-pulled, 6-yd. carrying scraper. The 6-in. thick floor, which was reinforced with a single layer of ⅜-in. mesh, was placed directly on the fill in alternate 20x30-ft. blocks. The floor-slab concrete was delivered as transit mix and one man in three hours was able to spread and finish the concrete for a 20x30-ft. section. Mechanical finishers were employed for this work.

The accompanying photographs illustrate other construction practices that resulted in rapid work. The location of project cannot be given because of restrictions due to the war.

MEN AND JOBS

H. G. Baity, professor of sanitary engineering at the University of North Carolina, Chapel Hill, has been reappointed a member of the North Carolina State Board of Examiners of Plumbing and Heating Contractors.

Harold M. Myers, instructor in Cooperative Education on the engineering faculty of Drexel Institute of Technology, has been called to service with the U. S. Naval Reserves with the rank of ensign.

T. H. Jackson, resident engineer for the Alabama Highway Department at Birmingham, has resigned to join the Dunn Construction Co. of Birmingham on a project near Memphis, Tenn.

Blake R. Van Leer, dean of the school of engineering at North Carolina State College, Raleigh, has been called to active duty as a major on the staff of **Lt. Gen. Brehon B. Somervell,** chief of Army Supply. **Herman B. Briggs,** professor in the department of mechanical engineering, has been named assistant dean of the school of engineering to replace Van Leer.

John Cavanagh, of Norwalk, Conn., has been elected chairman of the Merritt Parkway Commission, succeeding former Congressman Schuyler Merritt who retired recently.

Capt. W. P. DeJarnette, formerly a division engineer for the Alabama Highway Department at Alexandria City, has been promoted to the rank of lieutenant colonel in the Corps of Engineers.

W. A. Duff, engineer of bridges for the Canadian National Railroad at Montreal, has retired and is succeeded by **R. O. Stewart.**

M. A. Halvorsen, who has been district roadside development engineer for the Iowa State Highway Commission at Mason City, has resigned to join the G. H. Low Co. of Mason City.

M. W. Highland, assistant director of public works for Kansas City, Mo., has resigned to become engineer on the construction of a war plant in Kansas.

Lloyd Blanchard, formerly assistant area engineer for the WPA at Pittsburg, Kan., has joined the staff of the Kansas City, Kan., area office.

R. S. Christie, of Fort Worth, Tex., division engineer for the Amerada Petroleum Corp. of Texas and New Mexico, has reported for active duty as a first lieutenant in the coast artillery.

Engineers called to active service with the Corps of Engineers during the past week include: **E. B. Myott,** formerly senior engineer for Fay, Spofford & Thorndike, Boston, major; **E. G. Wernentin,** formerly chief engineer for C. F. Lytle Co., Sioux City, Iowa, captain; **M. E. Boyer, Jr.,** Charlotte, N. C., major; **M. E. McCoy,** of Topeka, Kan., **Frank J. McKee, Harvey E. Wirth, Chester A. Obma, A. J. Steffen,** and **H. E. Miller,** all formerly of the staff of the State of Wisconsin Board of Health; **W. M. Alsin,** Des Moines, Iowa, formerly assistant district engineer for the Portland Cement Association, major; **Thomas W. Layne,** assistant area engineer, Plant Protective Security Office at the Huntsville, Ala., arsenal; **M. P. Smith, Virginius Taylor, C. M. McClendon,** and **J. D. Rushing, Jr.,** all of the Alabama Highway Department; **F. Paul Anderson,** director of the Kentucky State Highway Department's research laboratory, captain.

Neal W. Knight, consulting engineer of Louisville, Ky., has been commissioned a Lt. Commander in the U. S. Navy's civil engineer corps.

Burleson Graham, assistant to **W. H. Klapproth,** traffic engineer for Dallas, Tex., recently enlisted in the U. S. Army.

Lieut. Col. Arthur W. Pence has assumed duty as Milwaukee district army engineer to succeed Col. Charles J. Taylor, recently transferred to Louisiana.

Elmer Luebbe, highway commissioner for Milwaukee, Wis., for eighteen years, has been reappointed to that post.

J. M. Doughty, Oklahoma City, Okla. engineer, recently enlisted as a carpenter's mate, first class, in the U. S. Navy.

Theodore S. Johnson, of Raleigh, N. C., professor of sanitary engineering at North Carolina State College, has been appointed chief of the state's Office of Price Administration.

W. H. Moore, of Akron, has been appointed engineer of the Ohio State Highway Department's Division 4, with headquarters in Ravenna.

Capt. Erland A. Tillman, assistant to the United States Army District Engineers at Denison, Tex. has been promoted to the rank of major.

Gan Anderson, engineer with the Cheyenne Indian Reservation at Cheyenne Agency, South Dakota, and **Gene Barry,** engineer with the Standing Rock Indian Reservation at Fort Yates, N. D., have joined the Bureau of Reclamation staff in Arizona concerned with resettlement of Japanese evacuees.

Maynard Kitchen and **Roy C. Ellis,** draftsmen with the South Dakota Highway Planning Survey, have resigned to accept posts as architectural draftsmen with Perkins & McWayne, architects of Sioux Falls, S. D.

Harry Stanley Rogers, president of the Polytechnic Institute of Brooklyn, N. Y., a graduate of the University of Wyoming, will receive an honorary degree from the University at commencement exercises at Laramie, June 8.

Maj. Eben Longfellow, in charge of construction of a quartermaster depot at Alexandria, Va., has been promoted to the rank of lieutenant colonel.

Lieut. Col. Harry R. Schuppner, area engineer at Walla Walla, Wash., has been transferred to a similar post in the Boise-Pocatello district of Idaho, with headquarters at Boise. **C. C. Phillips** will succeed Col. Schuppner at Walla Walla, with **J. A. Campbell,** resident engineer, as chief assistant. **Maj. Kenneth D. Campbell,** executive officer, and **Madison Hill,** senior administrative assistant, both were transferred to the new assignment.

Clarence Harvey, deputy Lincoln county engineer at Davenport, Wash., has resigned to engage in private engineering work on federal contracts near Spokane.

Lieut. Col. J. V. Johnston has assumed his duties as area engineer in charge of the construction of a new army cantonment near Durham, N. C.

Philip J. Kealy, member of the board of supervising engineers of the Chicago Surface Lines, has been appointed chairman of the board, to succeed the late Bion J. Arnold.

Kurt Hueftle, a construction engineer in the Panama Canal Zone, has become a junior engineer for the Bureau of Reclamation.

Emmett H. Hensing, of Ames, Iowa, has been appointed materials engineer on the Cherokee Dam at Jefferson City, Tenn.

Clair Wilson, engineer of Kearney, Nebr., has accepted a post as structural engineering draftsman for the Nebraska Ordnance plant near Wahoo.

Lieut. Comdr. Ben W. Creim, assistant chief engineer of the Bonneville Power Administration, has reported to the U. S. Navy for duty.

Release $22,000,000 for postwar planning work

New York City has amended its 1942 capital budget to make available about $22,000,000 for surveys and detailed plans for a huge post-war building program recently recommended by the City Planning Commission (*ENR*, May 14, p. 817).

The funds were released on recommendation of the planning group to make available to borough presidents sufficient funds for planning drainage work; for a proposed tunnel across New York Harbor to link the Boroughs of Brooklyn and Richmond (Staten Island) now connected only by ferry and for other city activities.

Meanwhile, under a bill signed by Governor Lehman at Albany, the state provided $50,000 to the New York City tunnel authority to prepare plans for the Staten Island-Brooklyn vehicular tunnel.

Planning commission members said work to be done would not interfere with war construction, since it would be fitted into idle time of contracting firms and city employees.

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WPA program adjusted to meet asphalt shortage

Airport and road work of the WPA in the Atlantic Seaboard states is being adjusted to meet the asphalt shortage caused by diversion of tank cars to transportation of fuel oils, according to Perry Fellows, chief engineer of the Work Projects Administration. Final surfacing of many road jobs with the normal amount of flexible type asphalt pavement will be postponed until tank cars become more plentiful. Mr. Fellows said that conservation can be effected by placing a relatively thin protective bituminous surface treatment on a pavement's foundation course. Design of the foundations under such conditions, in some instances, may call for thicker bases of non-critical materials. By deferring surfacing operations now, Mr. Fellows added, a backlog of such construction can be built up for completion later.

He also pointed out that special certification is not required to secure shipments of asphalt if intended for use on airport runways and aprons, but that truck transportation of these materials is required in movements of 200 miles or less except when such equipment is not available. Construction of airport projects constitutes a considerable part of the WPA program at the present time.

These limitations do not apply to airport and road projects outside of the Atlantic Seaboard area.

Millions for snow removal

Snow removal during the past winter cost the Pennsylvania highway department $3,603,797.71, a drop of more than $1,000,000 under the cost of the winter of 1940-41. The program covered 19,921 miles of state controlled highways and secondary roads.

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Hydraulics conference Scheduled for June 1-4

The second Hydraulics Conference of the Institute of Hydraulic Research of the State University of Iowa will be held June 1-4 in Iowa City. The conference is sponsored by the American Society of Civil Engineers, the American Society of Mechanical Engineers, and the Society for the Promotion of Engineering Education.

Speakers will include F. M. Dawson, dean of engineering at the University of Iowa; Boris A. Bakhmeteff, professor of civil engineering, Columbia University; L. A. Baier, of the University of Michigan; H. E. Babbitt and David H. Caldwell, University of Illinois; Harold A. Thomas, Carnegie Institute of Technology, and Arthur T. Ippen, of Lehigh University.

The session will devote itself entirely to those aspects of hydraulic engineering which involve fundamental principles of importance to other engineering professions and defense agencies of the government.

Utah cities adopt mutual aid water plan

To insure themselves against the possibility of interruption of water service due to sabotage, floods or war action, officials of many Utah cities and towns recently adopted a mutual aid plan, after a special meeting in Salt Lake City.

Under the plan, the water supply division of the Utah Council of Defense will make a complete inventory of men, materials and equipment available in each community. Thereafter, coordinators to be appointed will be able to requisition such equipment from the nearest community, on a voluntary basis, if it is needed by some other city.

Illinois discusses plan operation

Southern Illinois water plant operators, in a regular spring conference held at Carbondale recently, joined with their mutual aid water supply coordinators in support of the war time water supply protection plan established by the Illinois State Council for Defense, in the State Department of Public Health.

The operators were told that the plan had already been called into service on two occasions, the first after a tornado at Lacon in March, and the second during a $2,000,000 fire at Kewanee. On the basis of these experiences the usefulness of the mutual assistance plan during peace-time was said to be promising, and its function during war-time practically assured.

Training programs for local water organizations will be conducted soon.

Organize to aid utility disaster repair

More than 300 pieces of heavy construction machinery have been made available on a 24-hr. basis by the Constructors' Association of Western Pennsylvania, an A.G.C. affiliate, to aid public utility crews in case of war damage to essential services.

One of the first of its kind, the organization was put together voluntarily as a contribution to the general welfare.

Roy McGregor, of Pittsburgh, association secretary, said the association wrote letters to all its members, asking them to list equipment and crews available. Once this information was assembled, the organization made a control station out of its main office in Pittsburgh, keeping men on duty either there or in their homes on a 24-hr. basis.

Should any damage occur through enemy attack, this central office would receive word from the control office of the county executive defense council.

Division offices, set up in local population concentration points, would notify contractors nearest the scene of the damage who would in turn rush repair crews and machinery to the scene.

"With this system in effect," Mr. McGregor said, "the utility companies will be able to count on having ample machinery and trained men on hand any place, any time, to assist their regular repair crews in making emergency repairs. Our system is so flexible that we can call aid, for example, from all over Allegheny County to any particular point, and can send aid outside of the county to other points if it is needed."

Equipment currently available consists of 142 tractors, 86 cranes, 120 steam shovels, bulldozers, other cranes and similar machinery.

New York City's construction men already have joined in a somewhat similar organization (*ENR*, May 21, p. 832 and previous) which works directly under city departments in the event of need. Other contractors throughout the nation also have offered their services to their communities.

WASHINGTON HIGHLIGHTS

EXTENT of compliance by the construction industry with priority regulations is being checked by two investigations now being made for the War Production Board. Some 3,000 HOLC examiners are checking for WPB on compliance with order L-41, the order forbidding initiation of unauthorized construction after April 9 of this year. At the same time, 200 Wage and Hour Administration inspectors are checking up on builders of privately financed housing for war workers, who have been granted priority ratings, to see that terms imposed as conditions for those ratings are being obeyed.

CONSTRUCTION workers—who often have to travel long distances, both in going to and from work and in traveling from job to job—are entitled to supplemental rations of gasoline, the Office of Price Administration has pointed out in a public statement. Such workers should apply to any local rationing board.

LEGISLATION authorizing a barge canal and an oil pipeline across Florida to connect the Gulf and Atlantic coastal waterways has been approved by a House Committee and early Congressional action will be sought. At a total cost of $144,000,000, the bill would authorize a pipeline from Port St. Joe to Jacksonville and a barge canal from Port Inglis to Jacksonville.

PRIORITY RATINGS still outstanding on war construction jobs, which were issued on the now-discontinued P-19-a form have been amended to limit their application to the purchase of material which will be physically incorporated in the finished project. As issued, P-19-a forms permitted application of the rating to goods contributing indirectly to the project. The P-19-h form used at present is limited to goods incorporated in the job —as lumber, piping, roofing material, etc.

TOTAL mortgages insured under the liberal title VI of the Federal Housing Act, which provides for insurance of mortgages on practically a non-down-payment basis for war workers, is increased from $300,000,000 to $800,000,000 by a bill which has passed both houses of Congress. Permissible mortgage per house is raised from $4,000 to $5,400 and term of the loan from 20 to 25 years. A new section permits insurance, on the same terms, of mortgages on housing to be rented to war workers. Mortgage is limited to 90 percent of the value of the project, to $1,350 per room, and to $5,000,000 per project.

County may use discretion in road building, repair

Holding that the construction and repair of county roads, and the expenditure of road funds, is a question for the exercise of discretion by county commissioners, the Alabama court of appeals ruled last week that mandamus proceedings cannot be brought to force commissioners to repair certain roads, as long as no arbitrary abuse or discretion is shown to exist.

The ruling was made after a resident of Montgomery County complained that two county highways near his residence were allowed to become unsafe and impassable for ordinary travel.

Upholding a county court the higher court said:

"It is not possible to keep all roads in good repair at all times. The duty imposed upon county commissioners to keep the roads under their jurisdiction safe for public travel cannot necessarily be construed as requiring them to repair immediately any particular road, when the money or the instrumentalities under their control may be otherwise allocated and engaged at places where there is greater need."

Speeding the War Effort:

Bending every possible effort toward strengthening America's war participation, engineers and constructors throughout the nation are advancing new production ideas, new methods of doing their jobs, finding new sources and uses for critical materials. Some of the results last week were:

The Federation of Architects, Engineers, Chemists and Technicians, a CIO affiliate, has established a War Production Department to coordinate the national activities of its members and to be of direct service to the labor movement in the nation's war effort. First product of the department is a booklet entitled "Producing for Victory", especially prepared for labor organizations, labor management committees and management officials, as a practical working guide for methods of increasing production efficiency. Meanwhile, the Todd Shipyards Corporation, faced with the need to keep pace with growing demands for skilled labor in shipyard crafts has developed a training program in it's Brooklyn, N. Y., repair yard. Classes will be conducted in the yard during working hours by experts regularly employed at the yard, who will by action and words demonstrate the special techniques of their trades to hundreds of trainees. Trades to be taught will include welding, chipping and caulking, burning, shipfitting, sheet metal and coppersmith and others.

The Bonneville Power Administration has placed its personnel and equipment in Oregon and Washington at the disposal of Lyle F. Watts, Regional Forester in charge of the United States forests in the two states, to help protect Northwest forests from fires and act as front-line fire combat forces.

The nation's drive for scrap metal last week saw Governor Sam Ford of Montana ordering highway and engineering departments of counties and municipalities in the state to report any abandoned bridges that could be used for scrap iron; the inauguration of a "get in the scrap" campaign in six Standard Oil Company of Indiana refineries, which estimated that a cruiser, 13,000 cannon or more than 5,000,000 rifles could be made from the 15,000 tons of steel and iron scrap which the campaign is expected to produce; the issuance of report blanks by the Industrial Salvage Section of the Bureau of Industrial Conservation of the WPB expected to provide a check on the movement of industrial salvage of scrap metal; and WPB's estimate that 300,000 tons of copper and brass products, originally intended for use as ashtrays, doorknobs and roofing, have been saved for military use by limitation and conservation orders.

Among general salvage moves, the B. F. Goodrich Co. of Akron, Ohio, extended its campaign to assist rubber conservation by offering the services of a skilled rubber technician to make surveys of plants, to make recommendations on how much wornout belting can be salvaged, and how to get most service from belting now in use.

Labor-Management committees, originally appointed at the War Production Board's suggestion to expedite production, found themselves in a new activity last week as they moved to work out systems for pooling transportation among plant employees to combat the shortage on rubber and gasoline. Their activities ranged from obtaining special service from motor-bus and other public transportation companies to the establishment of "car-pools" among the employees themselves in order to share and conserve transportation means. Meanwhile, the Maritime Commission has asked bids for the construction of a number of wooden barges to be used in the coastwise trade to move bulk commodities, including petroleum, to the petroleum-hungry Eastern seaboard.

OBITUARY

John Lyle Harrington, 73, designer and builder of many bridges costing more than $100,000,000 in the United States, Russia and Canada, died May 20 at Kansas City, Mo. A native of Lawrence, Kan., Mr. Harrington was a graduate of the University of Kansas and had been an employee of the Elmira Bridge Co., the Pencoyd Iron Works, and several other engineering and railroad companies. Among completed projects on which he worked are seven bridges across the Mississippi River, seven over the Missouri River, bridges across Dunbarton Straits at the head of San Francisco Bay and at the mouth of the Don River near Rostov, Russia. He also designed seventeen movable bridges for the Canadian Government, and other structures in Manchuria, China, Japan, and New Zealand. He was president of the American Society of Mechanical Engineers in 1923 and a vice president from 1920 to 1922. He was also a member of the American Society of Civil Engineers, the American Railway Engineering Association, the Newcomen Society, the American Society for Testing Materials, the American Association for the Advancement of Science and the Engineering Institute of England and Canada.

Charles Beldin Snyder, 69, formerly an engineer with the Morgan Engineering Co. of Alliance, Ohio, died May 19 at Alliance.

Moses L. Brown, 65, former commissioner of public works at Quincy, Mass., died at Falmouth, Mass., recently.

Thomas Guy Windes, 64, of Winnetka, Ill., specialist on water softening, died May 19 at Evanston.

Dale Yingling, 42, division engineer at Texarkana, Ark., for the Southwestern Gas & Electric Co., died May 16 at Texarkana.

Thomas J. McGregor, 58, construction superintendent, died recently at Hamilton, Ont. His last employment, before illness, was with the George Porter Co. of Toronto, on construction of an airport.

William J. Comstock, 77, a building contractor for half a century, died recently at Birmingham, Ala.

John Martin Ruddy, 73, a building contractor formerly of Louisville, Ky., died at St. Louis, Mo., recently.

Walter William Campbell, 57, president and general manager of the Campbell Construction Co. of Sacramento, Calif., died recently.

Ontario, Quebec consult on Ottawa River power

T. H. Hogg, chairman and chief engineer of the Hydro Electric Power Commission of Ontario, last week entered negotiations with officials of the Province of Quebec looking toward immediate development of further power sources on the Ottawa River.

The river, main tributary of the St. Lawrence, is the interprovincial boundary for a great part of its length, and any power development must be carried out jointly by the two provinces, or by companies with provincial grants. One major joint power station is already built, at Chat Falls, some distance above Ottawa.

Premier Mitchell Hepburn of Ontario said sites now under review are at Carillon Rapids, between Montreal and Ottawa, and Des Joachims and Paquette Rapids, near Pembroke, upstream of Ottawa. He said that the plant envisioned would be exceeded in size only by the huge Queenston development at Chippewa. Hepburn indicated he was moved to consider the development because conclusive decision by the United States on the St. Lawrence power project is indefinite.

CONTRACTS AND CAPITAL

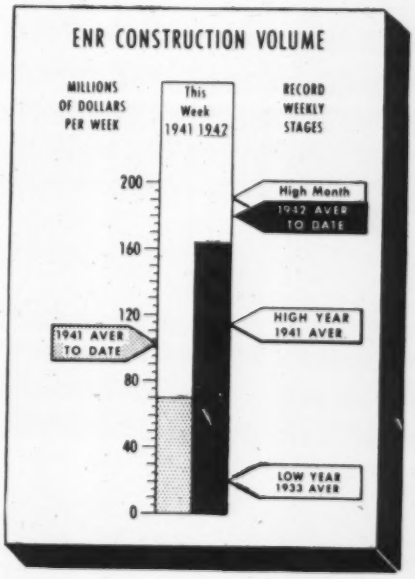
ENGINEERED CONSTRUCTION volume for the week totals $163,227,000, an increase of 132 percent over the corresponding 1941 week, but 25 percent lower than last week. Public construction climbs 284 percent over the week a year ago due to the more than sevenfold increase in federal work. The public total, however, is 24 percent below the preceding week. Private work is 81 percent under the 1941 week, and 41 percent lower than a week ago.

With this week's construction total, the volume for May reaches $1,044,572,000, the highest monthly total ever reported. Over 90 percent of the monthly volume is concentrated in federal work, and the balance is almost equally divided between private, and state and municipal construction.

The current week's volume brings 1942 construction to $3,936,356,000, an increase of 75 percent over the 22-week period last year, and just about on a par with the volume reported for the entire year in 1940. Public work is 125 percent higher than a year ago as a result of the 214 percent gain in federal work. Private work, however, is 53 percent lower than in the period last year.

In the classified construction groups, gains over the 1941 week are in waterworks, sewerage, public buildings, and unclassified construction. Increases over last week are in bridges, streets and roads, and unclassified construction.

New capital for construction purposes for the week totals $7,047,000. This compares with $34,755,000 for the corresponding week last year. The current week's new financing is made up of $3,997,000 in state and municipal bond sales, and $3,050,000 in corporate security issues.



CONTRACTS

(Thousands of dollars)

	Week Ending May 29 1941	May 21 1942	May 28 1942
Federal	$20,175	$195,721	$145,433
State & Municipal	20,876	11,487	12,336
Total public	$41,051	$207,208	$157,769
Total private	29,317	9,305	5,458
TOTALS	$70,368	$216,513	$163,227
Cumulative 1942 (22 weeks)			$3,936,356
1941 (22 weeks)			$2,252,182

Note: Minimum size projects included are: Waterworks and waterways projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1941 22 weeks	1942 22 weeks
NON-FEDERAL	$380,443	$279,868
Corp. Securities	111,542	90,416
State & Mun.	217,005	142,039
U.S.H.A. loans	22,550	.....
R.F.C. loans	29,346	47,413
FEDERAL	$2,891,337	$6,538,955
TOTAL CAPITAL	$3,271,780	$6,818,823

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost	May '42	272.30	130.89
Building Cost	May '42	220.14	119.00
Volume	Apr. '42	569	249

FHA MORTGAGES

	Week Ending May 24 1941	May 16 1942	May 23 1942
Selected for appraisal			
Title II	$36,331	$15,837	$13,000*
Title VI	$ 7,767	$11,162	$ 9,500*

* Subject to revision.

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York
ELSIE EAVES, Manager *SCOTT McLEOD, Statistician*
(Daily service also available—Write for details)

Location of ENR Correspondents

Symbols and Abbreviations Include

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily
A-E-M Architect — Engineer-Management type of contract.

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Named in order of Listing)

Water Supply	Unclassified
Sewers, Waste Disposal	Latin America
Bridges, Grade Cross'gs	Public Buildings
Streets & Roads	Commercial Buildings
Earthwork, Waterways	Industrial Buildings

Stages Reported

PROPOSED: (except Streets & Roads):

BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR);

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Note: To comply with censorship requirements, addresses on some reports are being generalized. Data which would reveal the purpose of the improvements and the size are withheld. The name of contractor and general area are reported.

WATER SUPPLY

PROPOSED WORK

†Ga., Columbus—City, WW imprvs. $206,800. **FWA.** Robert & Co., Bona Allen Bldg., Atlanta, engrs.

Miss., Flora—Enlarging WW Sys. $28,000. J. B. Williams, Yazoo City, engr. CD 4/1—ENR 4/9.

N. J., Bridgewater—Union Constr. & Holding Co., c/o Elizabethtown Water Co., 22 W. Jersey St., Elizabeth, 1 story, bsmnt., gallery, 31x112 ft., brick filtration plant addn. $30,000. R. R. Stone, 22 W. Jersey St., Elizabeth, engr.

N. J., Newark—Water Dpt., City Hall Annex, sheeting watermains, $42,000, WPA. C. Maltrom, Orange and N. 6 Sts., WPA engr.

†N. Y., Sidney—Village, WW sys. addn., 12 in. watermain between village and Peckham Reservoir, new valve chamber, tunnel at dam, Docket 30-180. $19,462. **FWA.**

Okla., Enid—Voted bonds WW extens., addn., wells. $99,000. J. C. Harrison, Enid, engr. CD 5/8—ENR 5/14.

Pa., New Wilmington—New Wilmington Water Supply Co., J. Wright, in charge, S. Market St., 1 story, 25x25 ft. water softening plant. $15,000. Chester Engineers, 210 E. Parkway, N. S., Pittsburgh, engrs.

†Tex., Elgin—City, R. L. Carter, mayor, water and sewer imprvs., Tex. 41-415. $207,800. **FWA.** J. Montgomery, Littlefield Bldg., Austin, engr. CD 11/3—ENR 11/6.

Tex., Gainesville—S. B. Lanius, mayor, water and sewer facilities. $402,420. Application filed for FWA funds. J. E. Ward, Harvey-Snider Bldg., Wichita Falls, engr. CD 4/6—ENR 4/9.

Tex., Karnack—WW sys. $45,000. P. M. Geren, 806½ Burnet St., Fort Worth, consult. engr.

†Tex., Randolph—Randolph Ind. School Dist. drilling, casing, developing water well, septic tank, pumphouse, playground courts, drainage, water lines, gas lines, grading grounds. $68,305. **FWA.** Hoke Smith, Inc., 2151 Fort Worth Ave., Dallas, archt.

Va., Blackstone—WW extens. $130,953. Applied to FWA.

†Wash., Retsil—Federal Works Agency, Alaska Bldg., Seattle, water sys. for Annapolis and Gaffner Tracts Water Dists. Docket 45-176. $75,000. **FWA.** Parker & Hill, Smith Tower, Seattle, engrs.

†Wash., Seattle—Water Dist. 20, King Co., c/o Gardner, Gardner & Hitchings, Arctic Bldg., engrs. water sys. exten., Docket 45-187. $93,561. **FWA.** CD 5/6—ENR 5/14.

Wash., Seattle—Bids soon ½ mi. 6 in. wood, ½ mi. 4 in. wood and iron watermains, Cedarhurst Dist. $20,000. C. L. Wartelle, County-City Bldg., engr.

Wyo., Casper—Water line. $20,000.

Wyo., St. Joe and **Stringtown**—Towns, WW sys. and sewage disposal plant. $50,000.

BIDS ASKED

Bids Asked June 2

Mass., Wakefield—Water Dpt., water sys., wells, pump. station, etc. $40,000. Weston & Sampson, 14 Beacon St., Boston, engrs. CD 5/12—ENR 5/14.

†N. H., Portsmouth—City, 126 Daniels St., Portsmouth, watermains, Contr. 5, NH 27-104. $55,000. **FWA.** CD 10/2—ENR 10/9.

Bids Asked June 3

O., Warren—Two 1 mg. temporary water filters and 28x50 ft. temporary frame bldg. Havens & Emerson, Leader Bldg., Cleveland, engrs.

Bids Asked June 4

†Ind., Charlestown—Town Bd., E. Orman, pres., waterworks imprvs., deep well water supply, brick, concrete pump house, turbine pump, 3 mi. cast iron or asbestos cement watermains, Ind. 12-139. $122,000. **FWA.** CD 4/20—ENR 4/23.

Bids Asked June 6

†Tex., Garland—City, J. R. Stultz, secy., WW exten., Tex. 41-460. $86,744. **FWA.** H. B. Gleb & Co., 1207 Texas Bank Bldg., Dallas, engrs. CD 4/29—ENR 5/7.

Bids Asked June 8

Va., Norfolk—At office W. H. Taylor, III, dir. P. Wks., rolled earth dam, concrete facing, concrete spillway, outlet pipe, clearing reservoir area; adv. ENR 5/28.

Bids Asked June 9

Tex., Brownwood—W. Mayes, mayor, water imprvs. supply lines, Cont. 5, Tex. 41-117. $135,000. J. Montgomery, Littlefield Bldg., Austin, engr.

†Tex., Galveston—City, c/o B. Harris, mayor, water supply line from wells, Tex. 41-133, Contr. 5. $260,000. **FWA.** Ford, Bacon & Davis, 203 City Hall, engrs. CD 5/11—ENR 5/14.

Bids Asked After June 10

N. H., Claremont—Town, Bd. Selectmen, Town Hall, earth dam. Over $15,000. Weston & Sampson, 14 Beacon St., Boston, Mass., engrs.

LOW BIDDERS

Calif., San Francisco—S. J. Hester, secy. Dpt. P. Wks., City Hall, May 15, water supply and sewerage sys., Log Cabin Ranch, San Mateo Co., for City of San Francisco and San Francisco Co., from W. Lenkeit, 318 Linden St., **$17,470.** Est. $19,500. J. J. Casey, City Hall, engr.

†Texas—U. S. Eng., Fort Sam Houston, May 19, from Glade Constr. Co., Wichita Falls, installing water distr. lines, **$76,355;** storm sewer collecting lines, **$119,970;** sanitary sewer collecting lines, Proj. 2, **$26,582,** all foregoing Inv. W-2161-42-79. No bids received May 19, building roads, streets, concrete sidewalks, etc., Inv. W-2161-42-79. CD 5/15.

†Tex., Hooks—J. T. Guinn, mayor, completing WW sys., reservoir, treatment plant, distr. lines, sewerage sys., disposal plant, earthen embankment, and spillway sect., Tex. 41-384-F, from Spencer Const. Co., Box 48, Carrollton. Est. **$125,000. FWA.** CD 5/14—ENR 4/2.

CONTRACTS AWARDED

★**†Calif., San Diego**—Federal Works Agency, 408 S. Spring St., Los Angeles, El Monte Pipe line for water supply sys., Calif. 4-149, Unit 8, Bid 6-RD 106, to American Pipe & Constr. Co., 4635 Firestone Blvd., Los Angeles, **$1,223,855.** Bids 5/12, awarded 5/19. CD 5/14—ENR 5/21.

†Ill., Port Byron—Town, WW sys. and sewerage sys., Docket Ill. 11-19, to D. Christensen Const. Co., 417 1 Ave. S.E., Cedar Rapids, Ia. **$119,883. FWA.** Bids 5/11. CD 5/14—ENR 3/5.

†Ky., Elizabethtown—City, F. W. Joplin, mayor, storage reservoir, intake works, distr. mains, appurtenances, Docket Ky. 15-117, (a) pipeline to Coleman Trainer & Co., Huntington, W. Va., **$39,649; (b)** structures, to Clark Stewart & Ward, Lexington, **$53,600. FWA.** Bids 5/6. CD 4/30—ENR 5/7.

†Mississippi—U. S. Eng., foot of Prytania St., New Orleans, La., water distr. sys. addns. to J. H. Owens, 4011 1st Ave., Birmingham, Ala. Bids 5/12, awarded 5/18. CD 5/14—ENR 5/14.

†N. H., Portsmouth—City, 126 Daniels St., watermain, to Odornes Point, Contr. 4, NH 27-104, to R. Zoppo, 44 Ramsdell Ave., Roslindale, Mass., **$117,550. FWA.** Bids 5/20. CD 5/11—ENR 5/28.

Tex., Houston—Pinecrest Housing Development Co., 4600 Lyons St., 2- to 8-in. cl. water lines, facilities, force account. **$32,000.**

†Washington—U. S. Eng., Textile Tower, Seattle, watermains, Inv. 869-42-531, to R. E. Rush & Co., 4039 Fauntleroy Ave., Seattle. Bids 5/4. CD 4/28.

Alta., Edmonton—Reservoir cover, to J. C. Haddow, 9921 83 Ave. **$43,700.**

Quebec—Wartime Housing Ltd., 50 York St., Toronto, Ont., underground services for watermains and house connections, sewers, roads and grading at Lauzon, Jonquiere, Kenogami, Chicoutimi and Quebec City, to Storms Contr. Co. Ltd., 49 Givens St., Toronto, about $200,000. CD 4/27 and ENR 4/30.

SEWERS, WASTE DISPOSAL

PROPOSED WORK

†Ariz., Tucson—City, expansion sewage disposal plant, etc. $160,000. Federally financed. R. E. Stallings, City Hall, engr.

Calif., Salinas—Rejected bids May 4, intercepting outfall sewer line, 2 laterals. CD 5/14—ENR 5/21, under LB.

Calif., San Diego—Made plans 11 St. Canon Sewer, from 10 and University Aves. through Balboa Park and Logan Heights, 20,674 ft. 12 to 39-in. vitr. pipe. $221,000. H. W. Jorgensen, City Hall, engr.

Calif., Watsonville — Voted $40,000 bonds, sewage treatment plant. CD 4/1—ENR 4/9.

†Colo., Lakewood—Lakewood Sanitary Sewer Dist., sewers, sewage disposal plant. Cont. 5-131. $350,000. **FWA.** D. H. Strong, Arvada, engr.

Ia., Clinton—Sewers, various streets. $30,000.

Ia., Davenport—F. A. Hass, city clk., rejected bids May 6, sewers. $35,386. CD 5/19—ENR 5/21, under LB.

★**Md., Sparrows Point (br. Baltimore)** — Comrs. Baltimore Co., Towson, sewerage sys., incl. force mains, 3 pump. stations, treatment plant. $900,000. S. A. Green, Court House, ch. engr. Baltimore County Metropolitan Dist. Robert T. Regester, Baltimore Life Bldg., Baltimore, consult. engr. CD 5/14—ENR 5/21.

Miss., Flora—Enlarging sewerage sys. $28,000. J. B. Williams, Yazoo City, engr.

N. J., Newark—Sheeting, sanitary sewers, manholes, catchbasins, various streets. $75,000. WPA. C. Malstrom, Orange and N. 6 Sts., WPA engr.